REMARKS

Applicant wishes to thank the Examiner for the courtesy shown during the March 21, 2005 telephone conference. During that conference, claim amendments to the independent claims were proposed by the Examiner. The Examiner suggested that the claims include the language at page 4, lines 1-2, of the application as well as page 15, lines 17-19. Claims 1 and 34 have been amended to incorporate such language into the claims as amended with our Response to Final Action mailed March 18, 2005. The following addresses the rejections as set forth in that Final Action.

Claim 1 has been amended to indicate that the interstitial polymer network forms an integrated contiguous network in the interstitial space that is permeable to liquids. It also has been amended to indicate that the interstitial polymer network is made from monomers where at least one of the monomers is a hydrophilic monomer. The interstitial polymer network further comprises: (1) a member of a binding pair (Claim 1) or (2) a reactivity moiety (Claim 34). Support for the term "hydrophilic monomer" can be found at page 24, lines 13-15.

Claims 1, 29 and 30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, obvious over either Good or Fuller. The Examiner asserts it would have been obvious to optimize the elements of Good and Fuller to enhance separation. Claim 1 has been amended to require that the interstitial polymer network be made in part from a hybrophilic monomer and further comprises a member of a binding pair. In addition, the interstitial polymer network is permeable to liquids. Neither Good nor Fuller disclose a binding pair nor do they disclose the use of a hydrophilic monomer in the preparation of their thin films. Moreover, each of Fuller and Good disclose the use of the polymeric thin film as a partitioning agent. In the present invention, a member of a binding pair (claim 1) is used to bind another member of the binding pair or a reactive moiety (claim 34) is to carry out a reaction. As such, each and every element of the claims as amended is not found in the prior art cited. The rejection should therefore be withdrawn.

Claims 1, 29 and 30 are rejected as being obvious over Good and Fuller in view of Betz. The disclosure in Betz referenced by the Examiner refers to carbon particles embedded in a polysiloxane network where the polysiloxane network is bound to an interior wall of a tubular glass column. In Betz, the surfaces of the carbon particles are used to separate analytes. Accordingly, the network is permeable to allow access to the carbon particles.

In Good and Fuller, the particulate material is "inert" and acts as a support for a thin film. See, e.g., Fuller Col. 2, lines 56-61. The skilled artisan would not be motivated to substitute the thin film of Fuller and Good with the porous polysiloxane network of Betz because (1) the particles of Fuller and Good are inert whereas the carbon particles of Betz are used for analyte separation and (2) the polymer film of Good and Fuller is on the surface of packed particles whereas the siloxane network of Betz supports dispersed carbon particles on the interior surface of a column.

Claim 6 stands rejected as being obvious over Good or Fuller in view of Betz and further in view of Frechet. Claim 6 as previously presented did not require a functional group. Claim 6 has been amended to indicate that the tether molecule covalently links the interstitial polymer network to the particles.

Claims 31-33 are rejected as being obvious over Good or Fuller in view of Betz and further in view of Frechet. The term "member of a binding pair" in claim 32 is now found in claim 1. The term "reactive moiety" in claim 33 is now found in independent claim 34. According to the Examiner, Frechet discloses that functional groups are essential for ion exchange chromatography, hydrophobic interaction, reversed phase chromatography and the use of affinants specific for a single compound.

Frechet discloses a macroporous polymer plug that is compact due to the <u>absence of interparticular volume</u>, Col. 3, lines 54-57. Frechet also states that the macroporous polymer plug it has <u>substantially no interstitial volume</u>, Col. 2, lines 53-56. The macroporous polymer plug is asserted to have numerous advantages over conventional columns that are packed with beads or particles (see abstract). One advantage is that the macroporous polymer plug is easy to prepare as compared to standard columns that require the "tedious packing of beads or particles,"

Col. 3, lines 58-60. Frechet therefore does not utilize particles with interstitial space and in fact teaches away from using such particles.

The skilled artisan would not be motivated to use the modifications of the macroporous polymer plug of Frechet with Good or Fuller because Frechet's macroporous plug has substantially no interstitial volume and is therefore physically distinct from the particles and interstitial spaces of Good and Fuller . In addition, there is no disclosure in either of Good or Fuller to modify the polymeric films disclosed therein to add a functional group such as disclosed in Frechet. As such, the combination of Good or Fuller with Frechet is inappropriate.

The remaining prior art rejections are directed to dependent claims and each rely upon additional references in combination with Good or Fuller alone or in combination with Betz and further in view of Frechet. It is submitted that independent claims 1 and 34 are patentable over these references and therefore each of the dependent claims are also patentable.

Finally, claims 35 and 36 stand rejected on the ground that the specification does not comply with the written description requirement relating to the pore size found in claims 35 and 36. In response, Applicant directs the Examiner's attention to page 3, lines 21-25 and page 14, lines 9-18. As stated therein, the pore sizes are theoretically defined by the length of the cross-linking molecule and the distance between cross-linking sites within the polymer network. It is preferred that at least one dimension of the polymer network theoretically exceed 0.1 microns and more preferably greater than 0.5 microns. This language is almost verbatim for that of claims 35 and 36. The only difference is the conversion from microns to nanometers. 0.1microns is the same as 100 nanometers and 0.5 microns is the same as 500 nanometers.

Applicant hereby requests a telephone interview with the Examiner to discuss this response and any other issues that the Examiner may raise in connection with the allowance of this application.

Based upon the foregoing, it is submitted that the claims are free of the prior art and satisfy the requirements of Section 112.

Respectfully submitted,

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